

REMARKS

A. Introduction

In the Office Action, claims 1-3 and 6-18 are rejected under 35 USC §103.

In summary of this Response, claims 1, 14, 15, and 17 are amended, and remarks are provided.

B. Objection to Claims 1, 14, 15 and 17

The claims are objected to on the ground that the term "only" is not supported by the specification. This term has been deleted from the claims so this objection is overcome.

C. Rejection of Claims

Claims 1-3, 6 and 8-17 are rejected as being made obvious by a combination of the Bigo et al. article and Watanabe, U.S. Patent No. 5,596,667 (the '667 patent). In regard to the independent claims, the Action again acknowledges that Bigo et al. fails to teach at least the non-linear medium as an optical fiber which performs amplitude modulation by four-wave mixing using the signal light. Nevertheless, the '667 patent is cited for teaching same, with reliance on Fig. 8 and the related description.

Claims 7 and 18 are rejected as obvious based on the above-discussed combination, and further in view of the Watanabe Article, "Simultaneous Wavelength..." ("Watanabe article").

For the following reasons, it is respectfully submitted that the present invention, as recited by amended claims 1, 3 and 6-18, was not rendered obvious by the cited art.

The independent claims herein generally recite the use of a nonlinear optical medium, i.e., an optical fiber, for performing amplitude modulation of a continuous wave to obtain light having a wavelength λ_c by four-wave mixing using the signal light as pump light, and have been further amended to indicate that the amplitude modulation is independent of the frequency f_s at which the signal light is supplied at the input port.

Support for the amendment is found at, e.g., page 3, lines 11-23, page 10, lines 5-19, page 25, lines 10-14, and page 4, line 23 to page 5, line 2.

It is not believed that Bigo et al. or either of the inventor's earlier Watanabe references teaches amplitude modulation that is independent of the frequency of the signal light supply. See, e.g., Bigo et al., at page 1214, right column, lines 45-48 ("When an RZ signal of sufficient power...of at least 80GHz.") and page 1215, left column, lines 1-5 ("Assuming that the round-

trip delay is precisely tuned to a multiple of the signal bit period...locks the phase of the laser modes."), and the '667 patent at Col. 9, lines 38-52 ("...modulation means 51 for modulating... the phase conjugate light."). The Watanabe article appears to lack any further teaching to complete either the Bigo et al. or the '667 patent disclosure in this regard.

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that claims 1, 3, and 6-18 are now in condition for allowance.

If there are any additional fees associated with this Response, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

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